

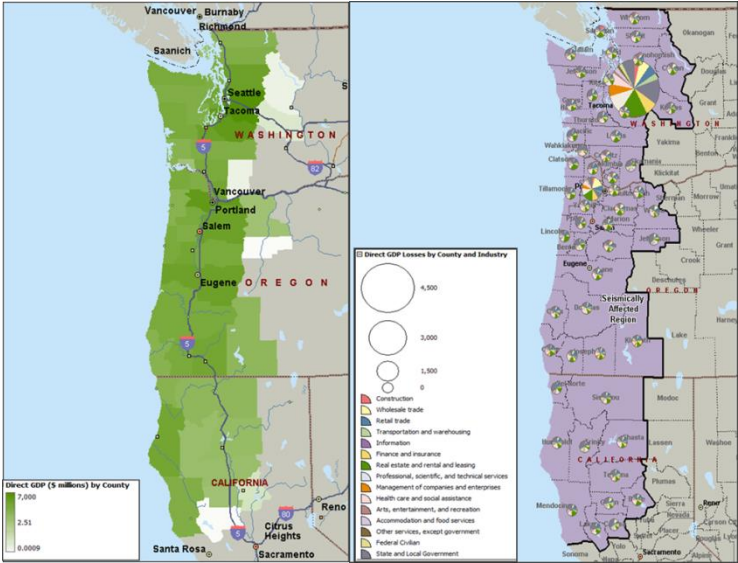
REGIONAL ECONOMIC ACCOUNTING TOOL (REAcct)

MODEL OVERVIEW

The National Infrastructure Simulation and Analysis Center’s (NISAC’s) Regional Economic Accounting Tool (REAcct) rapidly provides order-of-magnitude estimates (by nation, region, or sector) of a disaster’s potential economic severity, expressed as changes to gross domestic product (GDP), due to short-term disruptions. REAcct embodies concepts fundamental to regional economics and macroeconomics. REAcct is based on data from the national economic accounting system published by federal agencies.

MODEL CHARACTERISTICS

- ▶ Based on data from:
 - U.S. Bureau of Economic Analysis (BEA)
 - U.S. Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW)
- ▶ Incorporates well-established economic principles.
 - Input/output production technology.
 - Multiplier concepts—BEA Regional Input/output Modeling System (RIMS II) multipliers provide basis to calculate total economic consequences.
- ▶ Available via NISAC’s FASTMap visualization and analysis tool with state and county level geographies.
- ▶ Available outside of FASTMap with customizable geographies (zip code and census tract).
- ▶ Additional estimates of upstream economic impacts by industry.



MODEL APPLICATIONS

- ▶ Short-term (less than one year) disruptions of economic activity in the U.S.
- ▶ Hurricane economic impact analysis.
 - All Category 3 or above hurricanes since 2004.
 - NISAC hurricane planning scenarios.
- ▶ National-level exercises.
- ▶ Large-scale wildfire, earthquake, and flooding incidents.

QUESTIONS ADDRESSED

REAcct is designed to assist decision makers in understanding how the economy is affected by infrastructure disruption by answering the following types of questions:

- ▶ Given a specified short-term infrastructure disruption, which regions could have the larger economic losses?
- ▶ Which industries or counties are estimated to be most affected by an infrastructure disruption?
- ▶ What are the estimated impacts to industries indirectly affected by disruption of baseline economic activities?

ABOUT OCIA

The Department of Homeland Security, National Protection and Programs Directorate’s (NPPD) Office of Cyber and Infrastructure Analysis (OCIA) manages NISAC, which is a Congressionally mandated center of excellence in modeling, simulation, and analysis of critical infrastructure.

CONTACTS

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For more information, contact OCIA@hq.dhs.gov or visit our website: www.dhs.gov/office-cyber-infrastructure-analysis.